

Claims

1. A lens producing method for molding a desired lens molding by solidifying a thermoplastic molten resin in a molding lens cavity which is formed in an injection molding die for molding a lens, in which the lens molding is molded by using the injection molding die for molding the lens provided therein with the molding lens cavity in the injection molding die for molding the lens and a gate as an inlet port for the molten resin flown in the cavity to be opened toward the cavity, the improvement comprising the step of changing shapes of an opening configuration of the gate in response to molding of a minus lens having a thicker peripheral portion than a central portion thereof and molding of a plus lens having a thinner peripheral portion than a central portion thereof.

2. The lens producing method according to Claim 1,
wherein the lens molding is a spectacle lens having a meniscus-shape; and
15 wherein an opening area of the gate for molding the minus lens is larger than the opening area of the gate for molding the plus lens.

3. The lens producing method according to Claim 1, wherein the gate is provided
therein with a gate top member for determining the opening configuration of the gate, so
20 that the gate opening configuration formed by a space between the inner face of the gate
and the gate top member is changed by changing at least one of a width, a gate angle, and a
height of the gate top member as determinant elements of the gate opening configuration.

4. A lens producing method for molding a desired lens molding by solidifying a
thermoplastic molten resin in a molding lens cavity formed in an injection molding die for
25 molding a lens, the lens molding being processed by washing with a cleaning fluid and

coating with a coating fluid, comprising the steps of;

molding the lens molding by using the injection molding die for molding the lens provided therein with the plural molding lens cavities in the injection molding die for molding the lens, a gate as an inlet port for the molten resin flown in the cavity to be opened toward the cavity, and a runner connecting between the plural cavities through the gate, and a sprue connected to the runner;

changing shapes of an opening configuration of the gate in response to molding of a minus lens having a thicker peripheral portion than a central portion thereof and molding of a plus lens having a thinner peripheral portion than a central portion thereof; and

10 changing the volume of a connection portion of the runner and the sprue to be smaller in molding the plus lens than molding the minus lens.

5. The lens producing method according to Claim 4,

wherein the lens molding is a spectacle lens having a meniscus-shape; and

15 wherein an opening area of the gate for molding the minus lens is larger than the opening area of the gate for molding the plus lens.

6. The lens producing method according to Claim 4, wherein the gate is provided therein with a gate top member, determining the opening configuration of the gate, so that
20 the gate opening configuration formed by a space between the inner face of the gate and the gate top member is changed by changing at least one of a width, a gate angle, and a height of the gate top member as determinant elements of the gate opening configuration.

7. The lens producing method according to Claim 4, wherein the volume of the
25 connection portion of the runner and the sprue is changed to be smaller in molding the plus lens than molding the minus lens by placing a projected top member at the side of the

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runner adjacent to the sprue.

8. An injection molding die for molding a lens in order to mold a lens molding made of a thermoplastic resin, comprising;

5 a cavity for molding a lens;

a gate opened toward said cavity, said gate being provided therein with a gate top member determining an opening configuration of said gate and each of the plural gate top members prepared for changing the gate opening configuration being exchangeably placed in said gate.

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9. The injection molding die for molding the lens according to Claim 8,

wherein the lens molding is a spectacle lens having a meniscus-shape; and

wherein said prepared plural gate top members each is different in at least one of gate opening configuration determinant elements of a width, a gate angle and a height from 15 one another, the gate opening configuration determinant elements defining the shape of said gate opening configuration formed by a space between the inner face of said gate and said gate top member.

10. The injection molding die for molding the lens according to Claim 8, further

20 comprising a gate forming member opposing to said gate top member, said gate forming member either having a notch portion formed on the face opposing to said gate top member or not, and being exchangeable.

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11. An injection molding die for molding a lens in order to mold a lens molding made of a thermoplastic resin with a washing process by a cleaning fluid and a coating process by a coating fluid, comprising:

plural lens molding cavities for molding a lens portion;
 a gate opened toward each of said cavities;
 a runner connecting said plural cavities through said gate; and
 a sprue connected to said runner, said gate being provided therein with a gate top

5 member determining an opening configuration of said gate, each of the plural gate top members prepared for changing the gate opening configuration being exchangeably placed in said gate, and a connection portion of said runner and said sprue being provided therein with a projection protruding toward the inside of at least one of said runner and said sprue.

10 12. The injection molding die for molding the lens according to Claim 11,
 wherein the lens molding is a spectacle lens having a meniscus-shape; and
 wherein said prepared plural gate top members each is different in at least one of
 gate opening configuration determinant elements of a width, a gate angle and a height from
 one another, the gate opening configuration determinant elements defining the shape of said
 15 gate opening configuration formed by a space between the inner face of said gate and said
 gate top member.

13. The injection molding die for molding the lens according to Claim 11, further
 comprising a gate forming member opposing to said gate top member, said gate forming
 20 member either having a notch portion formed on the face opposing to said gate top member
 or not, and being exchangeable.

11 14. The injection molding die for molding the lens according to Claim 11, said
 projection is formed of a detachable projected top member.

Sum 25 12
B5 15. A lens molding having plural lens portions molded in molding lens cavities in an

injection molding die for molding a lens, a runner forming portion connecting the lens portions formed with a runner of the injection molding die for molding the lens, and a sprue forming portion connected to the runner forming portion formed with a sprue of the injection molding die for molding the lens, and undergoing a washing process with a
5 cleaning fluid and a coating process with a coating fluid, wherein a pinch portion is formed to a connection portion of said runner forming portion and said sprue forming portion.

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16. The lens molding according to Claim 15, wherein said pinch portion is formed by decreasing a diameter of the side of said runner forming portion adjacent to said sprue forming portion.

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17. The lens molding according to Claim 15, wherein said lens portion molded in the cavity is a meniscus lens for a spectacle lens, the lens portion having thicker central portion than peripheral portion thereof.